

Bulletin

No. 2 35th year

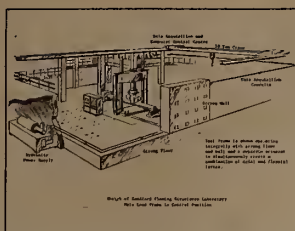
University of Toronto

Monday, August 24, 1981

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Increase funding or close some universities

committee on future of universities tells province

If the current level of government funding to universities prevails, some universities should be closed while others would require major restructuring, says the Committee on the Future Role of Universities in Ontario.

In any such restructured system, says the committee's final report, there will be some loss of accessibility and a reduction of research capacity but more will be lost if the province and the universities "muddle through" as they have for the past five years.

The drastically pared-down system proposed in the report provides for one comprehensive university capable of offering a broad range of high-quality programs at all degree levels. No more than four full-service universities would offer a more restricted range of high-quality programs at all degree levels. In addition, there would be four or five special-purpose institutions — including some designed specifically to serve northern Ontario — and several would be restructured to offer high-quality undergraduate instruction in arts and science and perhaps the early years of programs in

high demand, such as engineering and business.

Running such a system would be less costly than adequately maintaining the scope of the present system, says the report, but establishing it would require large short-term expenditures for compensation to faculty and staff who would have to be released.

In its preliminary report (May, 1981), the 15-member committee — chaired by deputy minister of education Harry K. Fisher — reviewed the five objectives for universities set out by the Ontario Council on University Affairs (OCUA) and endorsed by the government. They are:

- to develop a more educated populace
- to educate and train people for the professions
- to provide study at the highest intellectual level
- to conduct basic and applied research and
- to provide service to the community.

To meet those objectives, argued the committee, funding would have to be provided for meeting the costs of inflation

as measured by the consumer price index and the costs of faculty and staff career advancement along with a modest rate of real growth and an additional \$25 million annually for equipment and furniture replacement.

The final report is not optimistic that those funding needs will be met. Based on

the government's spring budget, it predicts that funding to universities will be inadequate to maintain quality programs at the present level unless increased priority is given to universities in the 1980s.

Continued on Page 2

Elimination of grade 13 should pose no problem

say U of T and COU

While a proposal to eliminate grade 13 is upsetting many secondary school teachers, it has been greeted calmly by the province's 15 universities.

The proposal is one of the key recommendations emanating from the Secondary Education Review Project (SERP), headed by Duncan Green,

formerly director of the Toronto Board of Education and now director of the University's School of Continuing Studies.

Compression of the present 13-year program into 12 years should pose no difficulty provided students continue to be as well prepared academically, says U of T's written response to the SERP discussion paper.

"We are not aware of any major problems resulting from our policy of admitting students from other provinces where matriculation is reached in 12 years."

Though some evidence indicates that these matriculants lag behind in mathematics, says the University, this could be a matter of curriculum priorities.

The Council of Ontario Universities (COU) says the switch from 13 to 12 years of formal schooling could be beneficial to students and should not bring any strong demand to abandon the three-year general arts degree and replace it with a general arts program spanning four years.

Both U of T and COU expressed concern, however, with the possibility of a sudden bulge of students seeking admission to first-year university programs if and when the proposal is implemented. Both say it's essential that Ontario universities be formally included in planning for the phasing-in of a new secondary school diploma program.

"There will be significant though short-term financial costs associated with the transition," says COU, noting that current funding is inadequate for universities to fulfil their present responsibilities without the added dislocations of phasing out grade 13.

"Because of the temporary nature of the dislocations, it would be prudent to fund the transitional costs separately from the universities' basic operating costs."

The University welcomes the SERP

Continued on Page 2

New director of physical plant

Robert Ivan Crouse, 52, has been appointed director of physical plant effective Sept. 1. He succeeds William Lye, who has taken early retirement.

A professional engineer who has spent 30 years in the armed forces, Crouse reached the rank of colonel and most recently served as director of general works at National Defence Headquarters in Ottawa.

He received a BSc from Dalhousie University in 1949 and joined the Canadian Army (Royal Canadian Engineers) in 1950 as a second lieutenant. He took further training at Nova Scotia Technical College, going on to the Canadian Forces School of Military Engineering at Chilliwack, BC.

After serving as a troop officer and intelligence officer in Korea, he was promoted to captain and posted to Montreal where his work involved the construction and maintenance of army facilities. During his subsequent posting to Whitehorse in the Yukon, Crouse served as a roads and bridge engineer, with responsibility for all bridges and culverts on the Canadian portion of the Alaska Highway.

Following two years at Chilliwack as second in command of a field squadron,



he became a major and was posted to Ottawa where his position involved working closely with electrical, mechanical, architectural, and civil design staffs.

In 1964-65, he was commanding officer of the engineering unit responsible for all construction and maintenance for

the United Nations Force — including airfields, roads, water supply and buildings — in the Middle East.

Six months as staff officer responsible for the New Brunswick Warning Centre and Civil Defence was followed by a year as camp engineer in charge of facilities in Camp Gagetown's 420-square-mile training area.

After attending Canadian Forces Staff College in Toronto, he served in Halifax and Esquimalt, BC, with full responsibility for the administration of construction engineering and of personnel, being promoted to a lieutenant colonel in the process.

In July 1979, while serving as director of base maintenance at National Defence Headquarters in Ottawa, he was awarded a certificate of merit for "outstanding service" to the Materiel Group, Department of National Defence.

Promoted to the rank of colonel and the position of director of general works in 1980, Crouse's responsibilities required liaison at all levels of government and with most federal departments such as Energy, Mines & Resources; Public Works Canada; Transport Canada; Environment Canada; and Supply & Services Canada on a day to day basis.

Moreover, when the federal/provincial Established Programs Financing (EPF) scheme is renegotiated, says the report, federal cash transfers to the provinces might be reduced. It notes that Ontario has made a capital investment of about \$2.3 billion (1981 replacement value) in its universities and that, for the past nine years, annual capital grants have been much below the amount needed to repair, replace and renovate the universities' physical plants which are seriously deteriorating.

The report suggests that by increasing the resources available, access to university education — which it says remains far from equal across all social and economic groups in the province — could be improved.

"The present retention rate in secondary schools in northern Ontario and

among Franco-Ontarians is low, and the university participation rate of both groups is well below the provincial average.

"More professional programs should be offered in the French language and, where numbers do not warrant establishing a program, appropriate arrangements should be made for Franco-Ontarians to pursue these programs in French-language universities elsewhere in Canada."

The report also suggests that students whose normal residence is in northern Ontario not be charged tuition at Lakehead and Laurentian Universities.

With an ever-increasing proportion of the student body coming from the over-25 age group, the report strongly urges that more academic programs, including professional programs, be offered on a

part-time basis. Also, says the report, rapid technological advances are making the provision of programs to "update" professionals essential.

And if Ontario is to retain its competitive edge in industry and business, the report warns, graduate awards of high value should be considered to deal with the critical shortage of graduate students in disciplines such as computer science, business, and some areas of engineering and the basic sciences, where world-wide shortages are growing. The report observes that few Canadians are being attracted to graduate study in these fields because attractive starting salaries are being provided in the private sector.

However, the report cautions against government intervention in controlling the number of students admitted to the various academic programs. Formulating dependable forecasts of demand for highly qualified manpower is difficult, says the report, especially when addressed at the provincial level because for most highly qualified professionals, the market is international.

"Where capacity exists in the universities, the government might consider special incentives to encourage students to enrol in areas of high manpower demand. However a major investment in increased capacity should be contemplated only when the indications of demand are unmistakable and likely to be enduring.

"When manpower demands are immediate and very pressing, consideration should be given to permitting vis-a-student graduates to obtain work permits or landed immigrant status."

Even if funding is adequate to meet the objectives set out for universities, says the report, there will still need to be changes in the present system. For example, the institutions "must be more active in seeking role differentiation" — which would imply "winding down" selected programs and would involve making severance arrangements for redundant faculty and staff.

"Academic tenure is not intended to provide guaranteed employment to

retirement age irrespective of institutional circumstances," warns the report.

Universities should ensure that there are regular reviews of all staff and faculty, including those with tenure, it says, adding that academics who become redundant through restructuring should have as much assistance as possible in relocating.

Universities must work toward facilitating faculty and staff transfers and pension portability, the report cautions, and should ensure that appropriate compensation and redundancy policies are in place, with sufficient funds earmarked to cover costs.

Another warning is offered on the subject of sabbaticals, which the report says are not fringe benefits and should not be awarded automatically but rigorously assessed in terms of potential benefits for scholarship, research and teaching.

"Universities should ensure that policies are in place which provide that research leaves are granted only to enable scholars to undertake significant work and that strict accountability is maintained."

While urging universities to develop closer research links with industry and government, the report warns against neglecting basic research, though it often appears unrelated to immediate industrial needs.

Other possible sources of revenue cited by the report in the event of cost increases continuing to outstrip operating grants, are tuition fee increases (with improved student assistance) and private donations.

Universities must vigorously examine ways of reducing institutional dependence on government grants, says the report, and government should explore improved tax incentives to encourage private support.

"A clear statement by government of the objectives to be reached," the report concludes, "will necessitate an equally clear statement that appropriate funding will be provided."

Secondary education

Continued from Page 1

proposal that universities be represented on appropriate curriculum guideline committees to eliminate gaps and overlaps and agrees that all curriculum guidelines — particularly for advanced-level courses — should contain specific subject content and clear expectations regarding skills, processes and evaluation procedures applicable to each level of difficulty for each subject.

But UofT is concerned that "academic excellence and intellectual challenge" are conspicuously absent from the SERP discussion paper's list of goals for education in Ontario.

"While we clearly recognize that the majority of secondary school students want and need preparation for direct entry into the job market," says U of T, "we fail to see why their needs and those of the university-bound students must be considered mutually exclusive."

COU termed "unacceptably weak" the SERP recommendation dealing with proficiency in Canada's two official languages — with the notion that students should be "strongly encouraged" to take courses in the second language having been relegated to a footnote.

"Against a background of declining secondary school enrolment in French as a second language," says COU, "demand for such courses in universities has been increasing at a dramatic rate. Universities are struggling to assemble resources to meet the increasing demand, much of which is at a quite basic level."

COU says students planning to enter an Ontario university should have a minimum of three credits in French (anglais) or in another language by the end of year four of the secondary school program.

Neither COU nor U of T could understand why the SERP discussion paper wanted to eliminate the longstanding practice of allowing external credits for certain courses offered by conservatories of music. The University said the practice had never created any problems and COU praised the conservatories for their valuable service.

The University strongly supports the SERP recommendation that schools be required to keep a record of scholastic achievement for each secondary school student on a common form to be called the Ontario Student Transcript (OST).

In addition to standardized information on a student's achievement in a course, U of T would like to see recorded the number of students taking that course and the median grade obtained — as well as the students' results on standardized achievement tests, initially in English and mathematics. The University suggests all advanced-level students write these tests in the penultimate year of their secondary schooling.

"The selection process for admission to U of T is not well served by the present individual school-based procedures for measuring student achievement," says the University.

Concern about equitable admission procedures also led the University to endorse the SERP proposal that the Ministry of Education strengthen its inspectorial role in private schools. U of T particularly urged an immediate and thorough investigation of commercially-oriented private schools aimed at preparing foreign students to enter post-secondary institutions in Ontario.

"In recent English proficiency tests administered by our Faculty of Arts & Science, many of these new private schools experienced 100 percent failure rates for their graduates, notwithstanding the fact that many of these students had been awarded good grades in their grade 13 English courses. The drop-out rate from U of T among this category of students is significant.

"Since our admissions decisions are based primarily on the individual schools' own evaluations of their students, and since the graduates of these schools compete for admission on an equal basis with the graduates of other secondary schools in the province, the apparent failure of the ministry's own inspection branch to bring qualitative judgement to bear on these new schools is a grave threat to the integrity of the entire secondary school system."

The University says certain questions will have to be answered before it will take a position on the SERP recommendation that pre-service teacher education be expanded from one to two years through the development of an internship program.

Among the questions are: Who will conduct the program? Who would deal with problems of evaluation, payment (if any) and supervision? What would be the relationship of the internship to the University? Would it result in a diminution of the University's role in teacher education? And finally, faced with an uncertain, short-term job market, how many four-year graduates would be willing to face another two years of expensive training without some form of subsidization?

One aspect of teacher training the University endorses is the SERP proposal to encourage development of in-service and pre-service programs to equip all teachers with guidance and counselling skills.

"We also heartily endorse the recommendation that the role of guidance counsellors from grades 7 to 12 be clarified in respect to their responsibilities for career counselling and personnel counselling, with a view to placing additional emphasis on career guidance."

President Ham responds to report on future of universities

The following is a statement from President James Ham on the report of the Committee on the Future Role of Universities in Ontario.

With hard hitting clarity this excellent report of a committee of laymen, government officials and university staff established by the premier and the minister calls on the government to make a crucial decision about the future shape and funding of our system of university education and research in Ontario which is being seriously underfunded by several points under inflation.

The report makes it clear that, in terms of Ontario's critical need for economic and social development, funding at a modest level of real growth is justified. The report then poses a dilemma for the government. If an attempt is made to sustain the existing university system under a policy of accessibility for all eligible persons with current levels of funding, the system will sink into mediocrity and fail to provide the stimulative infrastructure for basic and applied research essential to the provincial economy in a competitive international environment that is increasingly knowledge based.

The government is therefore called

upon either to affirm a higher priority for the universities during the 1980s or carry out a major restructuring of the system of universities through active political intervention, probably closing several institutions. The report properly affirms that the key to the effectiveness of the universities is quality.

Universities are long-term institutions that sustain the roots of the creative and adaptive fibre of Ontario and Canada. Their research created the basis for modern microelectronics, telecommunications and nuclear energy and sustains the critical awareness of our society. They lead the way in developing highly trained manpower. If Ontario, as it must, is to be a province that thrives on its wits and capacity to develop and use knowledge as well as material resources, our universities must be strong servants of the public good. If they are not strong, neither will be our future. The issue is the level of health of our society. We in the universities must work harder to achieve better public understanding of the sustaining and enlivening role of these institutions in the province.

Yukon excavations of man in new world, project to improve nutrition in the north

awarded Donner Foundation grants totalling \$375,000

Two U of T research projects have received grants totalling \$375,000 from the Donner Canadian Foundation.

A \$225,000 grant will support continued research into the archaeological findings in the Old Crow Basin of the Yukon Territory by a research team headed by archaeologist William Irving. The team includes earth scientist Alan Jopling, palaeontologist Brenda Beebe, and John Tomenchuk, a postdoctoral fellow in archaeology supported by the Donner grant.

Bone tools already excavated in the Old Crow Basin date back 150,000 years, according to the team's previous research, which was also in part supported by the Donner Foundation. Findings, based on this research, were recently published in *Arctic*.

The bone tools represent the earliest physical evidence yet discovered of man

in the New World. Previous evidence suggested man had been here for about 70,000 years. Only 15 years ago most archaeologists believed the first human arrived from Asia 12,000 years ago.

The additional Donner Foundation grant money, to be allocated over a three-year period, will permit the enlargement and extension of excavations in the Old Crow Basin in an attempt to discover more artefacts.

In addition, laboratory studies will continue of several thousand artefacts previously collected. Other projects will include the analysis of skeletal remains of animals to determine hunting and butchering practices of humans; a synthesis of geomorphic events that affected the Old Crow Basin; and concentration on the newly-emerging field of analysis of implements made of bone.

A three-year research project on

northern Canadian agriculture, which has the potential to improve human nutrition in the north, has received a \$150,000 Donner grant.

The project will be carried out by Professors W.R. Cummins and Josef Svoboda of the Department of Botany at Erindale College. It's aim is to produce sufficient yields of northern grown produce to determine if dietary needs of the Inuit can be met from locally grown plants already traditionally part of their diet.

Nutrition in the north is poor because of changes in diet and the high cost of imports. Caloric value is low and the diet is deficient in some vitamins, including vitamins C, A and D, as well as minerals such as calcium, phosphorus, iron and iodine.

Research activities will include identification of plants that grow in the north and are or were traditionally part of the diet of the Inuit. Thirty species of plants have been collected so far and a nutritional analysis of each of these species will be conducted to determine their nutritional value.

Native northern plants will be grown from collected seeds and transplanted

in plots in small, cost-efficient greenhouses at the Arctic Research & Training Centre in Rankin Inlet, NWT, with the view to improving the yield through minor changes of environment. Several plants now produce at rates far below their potential but hold promise of becoming efficient crops. These arctic plants are already cold-tolerant and unlike temperate crops need not be adapted to the northern environment. Research into the mechanism of cold tolerance in these plants will be further studied.

Part of the research project includes plans for marketability studies to be done through a cooperative program with local entrepreneurs.

The Donner Canadian Foundation is a private foundation with nationwide interests. Established in 1950 by the late William H. Donner, industrialist and philanthropist, the foundation, through its grants program, lends particular support to research involving Canada's north and the native peoples of Canada.



The Queen Mother comes to lunch

The Queen Mother talks with President James Ham and Mary Ham and the Most Rev. Lewis Garnsworthy, Archbishop of Toronto, before a luncheon in Hart House July 3. The host for the occasion was Solicitor General Robert Kaplan (left).

U of T delegation successfully lobbies city hall to urge federal support of universities

Toronto City Council unanimously passed a motion Aug. 10 urging the federal government not to cut its support of post-secondary education through the Established Programs Funding (EPF) scheme and to increase funding for research.

A delegation representing U of T administration, faculty, staff, and students appeared before the city's executive committee July 29 seeking support for a resolution which refers to the University's importance to the city as an employer and provider of community services, as well as an institution of higher learning.

Members of the delegation were Vice-President & Provost David Strangway, faculty association president Harvey Dyck and executive assistant Vicky Grabb, staff association president Karel Swift, and Students' Administrative Council (SAC) president Matt Holland and external commissioner Kathleen Crook.

Proposed cuts to EPF, currently under review by a parliamentary task force and under discussion by the federal cabinet, represent half the \$3.1 billion transferred to the provinces in support of post-secondary education.

Scuffle 'regrettable' but organizers cheered by large crowd at by-election meeting

A candidates' meeting mounted by the University of Toronto Faculty Association (UTFA) Aug. 10 to provide a dialogue between the major candidates in the federal Spadina by-election and members of the University community was cut off abruptly when a fringe candidate attempted to take control.

A crowd of about 500, which had been moved from the Hart House Debates Room to larger quarters in Convocation Hall, had just heard Liberal Jim Coumts praise universities as "the heart of civilization" when Independent Jim Turmel, who was wearing a construction hard hat bearing the slogan "Engineer for MP", grabbed a microphone from history professor William Nelson, the chairman.

A scuffle ensued, with each man pushing the other off the platform. "The whole assumption of freedom of speech assumes a kind of ordinary civility that this man certainly didn't demonstrate," Prof. Nelson said later. Though the meeting had not been intended as an all-candidates' forum, when four uninvited fringe candidates joined Coumts, PC Laura Sabia and Dan Heap, who later won the riding for the NDP, "we decided to try to accommodate them and let them have equal time in their initial remarks," said Nelson.

But, he said, Turmel was "single-minded" about wishing to dominate the forum. Nelson adjourned the meeting at 9.40 p.m., after only two questions, with Turmel still on stage talking as the audience dispersed.

Originally, the three main candidates were to have answered questions from a panel on topics relating to the University, but the turnout was so large that the attempt to structure discussion had been abandoned. "We really wanted to focus discussion on the universities' pro-

blems," said UTFA executive assistant Vicky Grabb, "but the other four candidates weren't discussing university issues."

The meeting got wide press and television coverage, she noted, "but unfortunately very little of it focused on the fact that the universities are perishing from under-funding".

Participants and organizers were nonetheless pleased with the concern shown by the candidates and the overflow audience. The large turnout was an indication that in the campus community the level of dissatisfaction with funding is rising rapidly, said Professor Harvey Dyck, president of UTFA. "The campus is becoming very political and very active. There's been a coalition this summer of students, staff and faculty to focus national attention on this issue."

Professor Timothy Colton, who teaches political science at Scarborough College, thought the meeting was by no means a failure, though "it's too bad that the politicians' statements were obscured by the scuffle".

President James Ham, who was to have been on the panel with Colton, Matt Holland, president of the Students' Administrative Council, and Karel Swift, president of the staff association, said he felt the incident was regrettable, but the holding of the meeting itself was the important thing. "The three major party candidates agreed to discuss federal support for universities at a university and a large number of people came out to hear them say it was essential."

SSHRC Grants to Facilitate International Collaborative Research

The purpose of these Social Sciences & Humanities Research Council grants is to encourage Canadian scholars to collaborate with scholars in other countries on research projects of mutual interest through joint international seminars or through consultations on collaborative programs of research. Private scholars and those on the faculty of a Canadian post-secondary institution are eligible. Established Canadian scholarly societies and institutions may apply for seminar support. A foreign scholar, learned society or institution must co-sponsor an application for a seminar. For consultation grants, scholars in each country must be independently engaged in shared fields of research out of which joint or independent publications may ensue.

Support is offered for small seminars, workshops or colloquia organized jointly by Canadian and foreign scholars to discuss, coordinate or evaluate cooperation on specific research topics or themes. These meetings may be held either in Canada or abroad and may involve scholars from one or more foreign countries. It is expected that about half of the seminar participants will be Canadians. One Canadian must act as principal organizer and one foreign scholar must assume a similar role as co-sponsor.

Support is also offered for consultations between Canadian and foreign scholars on joint or parallel research projects in progress or planned. Consultations at any stage of the research process may be considered.

The next deadline date in Ottawa is *September 1*. For further information, call ORA at 978-2163.

SSHRC Agreement with the Centre national de la recherche scientifique (CNRS) of France

The purpose of this agreement is to facilitate scholarly cooperation in the social sciences and humanities in research programs of common interest. In particular, it provides for the exchange of researchers who are participants in or who wish to undertake joint research ventures involving Canadian and French scholars or teams of scholars.

Canadian candidates must submit applications to the council by *September 1*. The grants are not intended for persons pursuing a university degree. For further information, call ORA at 978-2163.

E.W.R. Steacie Memorial Fellowships

These Natural Sciences & Engineering Research Council fellowships are awarded to outstanding and promising

scientists and engineers whose career development could be vitally enhanced by permitting them to devote all their time and energies to research. The fellowships are awarded initially for a one-year period but are renewable for a second year upon request by the fellow and his university. The fellowships are available for research in the fields supported by the council. Candidates should normally have obtained their doctorate within the last 12 years. There are no restrictions as to nationality or citizenship. Candidates may not apply on their own initiative. Nominations are invited with the concurrence of the university's executive head. Only one candidate should be nominated from a given department of a given university.

Nominations in letter form from departmental chairmen, with supporting documentation, should be sent to ORA, which will then arrange for a supporting letter from the President. The deadline date at the agency is *September 1*. For further information, call ORA at 978-2163.

Ontario Ministry of Health

The OMH has recently announced implementation of a personnel support program in health research. This program is designed to provide training and career opportunities to health researchers in clinical and community health fields. Support will be provided in the following three broad categories:

- (1) Program grants — support of graduate students at the master's and doctoral levels;
- (2) Fellowships — for research experience after formal training;
- (3) Career scientists — career support of independent researchers.

To provide the fiscal resources to implement this program, the Ontario Council of Health has recommended a redirection of funds from other research programs. This action includes the phasing out of the provincial health research program which will be accomplished by the natural attrition of projects presently supported; thus, no new applications will be accepted in this or subsequent years.

Further information on the new programs is expected in September.

U of T Humanities & Social Sciences Committee Conference Travel Grants

Funds are available to cover transportation costs only to present a formal paper at an overseas conference. The next deadline date is *September 15* for conferences taking place from Dec. 1, 1981 to March 31, 1982.

Because funds are usually fully committed for each conference grant competition, it is recommended that applications be submitted by the above deadline date even if official confirmation of the invitation to give the paper is delayed. For further information, call ORA at 978-2163.

Upcoming Deadlines

Health & Welfare Canada, Welfare Directorate research grants: *September 1*
Connaught Fund special research program grants: *September 12*
Ontario Mental Health Foundation research grants and major equipment grants: *September 30*

Deadline Change

Ontario Heart Foundation: The foundation has advanced the deadline date to *September 30*, by which date applications must be received in Ottawa at the Canadian Heart Foundation offices. Forms and guidelines are available from the research office of the Faculty of Medicine, 978-6013, or from ORA, 978-2163.

Since it is sometimes necessary to change the date or time of an oral examination, please confirm the information given in these listings with the PhD oral office, telephone 978-5258.

Tuesday, August 25

Michael Frank Powell, Department of Chemistry, "Isotope Studies on the Ionization of Carbon Acids." Prof. A.J. Kresge. Room 309, 63 St. George St., 10 a.m.

Penny Susan Albright, Department of Pharmacology, "Differential Anti-Convulsant Response of the Amygdala and Cortex in the Kindling Model of Epilepsy." Prof. W.M. Burnham. Room 301, 65 St. George St., 2 p.m.

Edmundo J. Cayama, Department of Pathology, "Studies on Initiation of Hepatocarcinogenesis by N-Methyl-N-Nitrosourea in the Rat." Prof. E. Farber. Room 309, 63 St. George St., 2 p.m.

Friday, August 28

Martin L. Chase, Centre for Medieval Studies, "Einar Skulason's *Geisli*: A Critical Edition." Prof. R. Frank. Room 309, 63 St. George St., 2 p.m.

Tuesday, September 1

Adeyemo Adeniji-Fashola, Department of Mechanical Engineering, "A Mechanistic Approach to the Modelling of the Pressure Drop in Diabetic Two-Phase Flow." Prof. A. H. Abdelmessih. Room 309, 63 St. George St., 2 p.m.

Tuesday, September 8

Anne Giacomelli, Department of Classical Studies, "Odi et amo ergo sum." Prof. L.E. Woodbury. Room 309, 63 St. George St., 2 p.m.

Wednesday, September 9

Kam-Leung Yan, Department of Physics, "The X-Ray Diffraction Study of the Structure of Fluid Argon." Prof. J.C. Stryland. Room 309, 63 St. George St., 2 p.m.

Thursday, September 10

David Bazett-Jones, Department of Medical Biophysics, "Organization of DNA in the Nucleosome." Prof. F.P. Ottensmeyer. Room 309, 63 St. George St., 9 a.m.

Oriane Almeida Santana Lima, Department of Medical Science, "Factors Affecting Bronchial Healing Following Lung Transplantation — An Experimental Study." Prof. J.D. Cooper. Room 309, 63 St. George St., 2 p.m.

Thursday, September 17

Peter Russell Grahame, Department of Educational Theory, "Critical Practice: Toward a Hermeneutic of Critical Social Inquiry." Prof. D. Misgeld. Room 111, 63 St. George St., 10 a.m.

Columba Kam-Kuen Yeung, Department of Chemical Engineering & Applied Chemistry, "The Chemistry, Kinetics and Kinetic Modelling of Photochemical Smog Formation." Prof. C.R. Phillips. Room 309, 63 St. George St., 2 p.m.

Friday, September 18

Mima Cora Grant Kapches, Department of Anthropology, "The Middleport Pattern in Ontario Iroquoian Prehistory." Prof. W.M. Hurley. Room 111, 63 St. George St., 10 a.m.

Geographers study desertification in northwest China

For the past 1,000 years, the Chinese desert seems to have been expanding, but scientists are not sure why. Nor do they know how much real effect has come from the efforts of the Chinese over the years to hold down their soil through such measures as irrigation and clay piling.

Working with photographs and digital scans from US satellite explorations, Professor Shiu Luk and Professor Norman Hardy of the Department of Geography at Erindale College will attempt to answer these questions. They'll also try to determine whether their observations are of significance in other desert areas of the world.

The geographers have been awarded \$56,000 by the Social Sciences & Humanities Research Council for a two-year study of trends in desertification in northwest China.

One possible explanation for desert advances and retreats, Prof. Luk says,

is a link with changes in climate in the area; another is simple mismanagement of the land by human beings. Climate, soil, terrain and land forms will be analyzed in their investigation, and eyewitness accounts of changes will be recorded. Professor Kenneth Hare, provost of Trinity College and an authority on the effect of climatic changes on desert expansion in Africa, will serve as a special consultant.

To study changes that go back to about 1000 BC, the team will use historical and archaeological documents. A geographer at Peking University, Professor Ren-zhi Hou, will assist them in this part of their investigation. Their biggest difficulty so far, says Luk, has been to obtain access to the deserts they intend to study. Certain areas of China are simply not open to foreigners. Most of their work, though, will be done at Erindale, where both will be teaching in the coming year.

Bulletin

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Material may be reprinted in whole or in part with appropriate credit to the *Bulletin*.

Published every two weeks by the Department of Information Services, 45 Willcocks St., University of Toronto, Toronto, M5S 1A1
Telephone 978-2102

Submissions for publication must be in the *Bulletin* office 10 days before publication date. Display advertising space must be reserved two weeks before publication date.

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\$20 million NSERC budget increase revitalizes equipment grants program

A \$20 million addition has been made to the Natural Sciences & Engineering Research Council's 1981-82 budget, bringing it to a total of \$205.5 million.

The federal government says the increase should allow NSERC to maintain and expand on the initiatives of its five-year plan launched in 1980. Over the first two years of the plan, NSERC has received budget increases totalling 67 percent, or 40 percent excluding allowances for inflation.

NSERC president Gordon MacNabb says about 75 percent of the money will go towards research equipment applications already recommended for funding by a panel of experts. (For details of two such grants to U of T see stories this page.) The

equipment grants program had suffered recently because much of its budget was redirected into NSERC's manpower programs.

NSERC is Canada's largest single funder of university research and the major source of scholarship funding for graduate students and postdoctoral fellows. In 1980-81, it received about 14,000 requests for research grants and scholarship support and made almost 10,000 awards.

Priorities of NSERC's five-year plan are to increase the number of highly trained researchers in Canada and to attack the problem of obsolescent university research equipment.

CSRG awarded NSERC grant for VAX computer system

by Pamela Cornell

Four years ago, U of T's computer science department was rated sixth best in North America (after Stanford, MIT, Carnegie-Mellon, Cornell and Berkeley).

But the Advisory Committee on Academic Planning (ACAP) that offered that positive assessment added a negative rider.

"The main deficiency noted was limited interactive computing facilities," said the ACAP report. "We hope this can be remedied."

Four years later, the deficiency is being remedied. The University's Computer Systems Research Group (CSRG) is buying a large VAX computer system, using a \$658,909 major installation grant

from the Natural Sciences & Engineering Research Council (NSERC).

CSRG was formed in 1969 to facilitate cooperative research by faculty members from the computer science department in the Faculty of Arts & Science and the electrical engineering department in the Faculty of Applied Science & Engineering.

With existing facilities operating — with frequent bottlenecks — at full capacity, night and day, seven days a week, CSRG desperately needs a more powerful set-up.

"It will be like the difference between a Model T and a contemporary car," says Professor Alex Borgida, one of 24 researchers listed in the grant application. "The Model T just couldn't carry certain types of loads."

"When a researcher is probing the limits, dealing with conceptual problems is hard enough without also having to contend with physical limitations."

The new VAX system combines higher processing speed with a greater capacity for information storage. One application of this substantially enhanced capacity is the study of computer networks and their application in office automation.

Another research area that will benefit enormously from the new system is artificial intelligence (AI). It's one thing to program a computer to play chess based on concepts of probability and statistics. It's quite another to simulate the subtle complexities and unpredictable nature of human thought processes.

Not only must AI research find ways of storing the vast amounts of information we have about our world, it must also try to manipulate that information coherently.

Practical applications of AI are legion. For example, several U of T researchers are applying AI techniques to medicine. Ultrasound "movies" are made of heart motion, after which a computer is used to detect defects by analyzing massive amounts of information. Cardiologists are seeing their field become increasingly systematized as the computer specialists keep hounding them for more and more information about the heart's function.

Still other researchers are taking an AI approach to building a computer model of conversation. Their goal is information retrieval using English rather than formal computer programming languages.

While the cost of computer hardware is steadily diminishing, the cost of producing and updating software is skyrocketing because the process is slow and labour-intensive. Developing AI "program generators" would partially automate this process, slashing costs dramatically.

The new VAX system — to be installed this fall at 121 St. Joseph St. — will also help

- the numerical analysts who use mathematics in computing and computers in mathematics
- the "structured sound synthesis" researchers who are exploring the use of computers in composing music
- the computer graphics researchers who are trying to improve the quality of images displayed on computer screens
- the many researchers who want to devise new computer languages or schedule programs more effectively or improve a system's response

"If we were getting three times the power of this new system," says Borgida, "it wouldn't have been wasted. One of the realities of research is that, as the equipment gets bigger and better, our investigations expand to fill the potential."

NSERC grant buys new stress-testing system for civil engineering

by Pamela Cornell

The recent collapse of an elevated walkway — killing 112 people in a Kansas City hotel — is a reminder of the ongoing need for rational and efficient design codes in structural engineering.

To help serve that need, U of T's civil engineering department has received a \$754,000 major installation grant from the Natural Sciences & Engineering Research Council (NSERC).

The grant will finance a unique testing system in which large-scale components of buildings, bridges, nuclear power plants, and off-shore structures can be subjected to realistic loading histories.

The stressful effects of crowds, earthquakes, high seas, tornadoes, even the impact of a plane crash, can now be simulated and assessed as never before — thanks to the precision, "intelligence" and strength of this new testing system.

When such "load-bearing" structures as automobiles and aeroplanes are designed, a prototype is built, tested, and improved once weaknesses have become apparent. Only then is the design mass-produced for public use.

But the typical civil engineering project is unique — the CN tower, for example — so the designer only has one chance to come up with a concept that will be both cost-efficient and safe under extreme conditions.

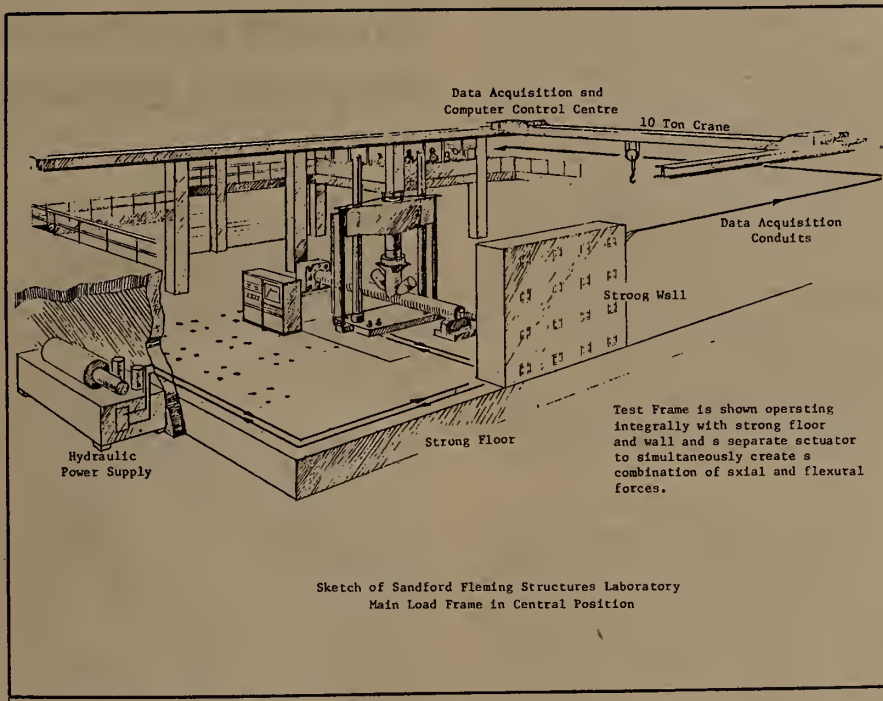
"Obviously we can't test a whole bridge or building," says Professor Michael Collins, director of the civil engineering laboratories.

The present lab — worth about \$5 million — is equipped to test individual elements, such as columns, beams and slabs. Each of the three testing machines there represents state-of-the-art technology for their respective times (1920, 1960 and 1975) and they're all still in regular use.

When the new machine is installed next summer, Collins and his colleagues will be able to advance from element testing to sub-assembly testing with the help of complicated computer models that will simulate boundary conditions.

The machine's piston will be capable of applying 300 tons of pressure which, in itself, is not remarkable, says Collins.

"Some of the big, dumb giants we already have can push with 600 tons of force. The difference is the new one will



be precision-automated by a computer that will also do analytical calculations."

As a structural element becomes damaged, the effect is felt throughout the structure, altering the loads to which the original element is subjected. The computer will see that pressure is adjusted accordingly.

"We used to be locked into boundary conditions at the outset of a test," says Professor Peter Birkemoe. "Now we'll be capable of on-line control. We can change the parameters as we go along."

Birkemoe specializes in testing structural steel, while Collins' research focuses on reinforced concrete. By developing analytical models that predict behaviour under load, they help designers anticipate potential damage and reparability in a structure.

"Between five and 10 billion dollars a year is spent annually constructing what Canadian structural engineers have designed," says Collins, "yet less than one-tenth of one percent of that amount is spent on structural engineering research in this country."

"In some countries — France and Sweden, for example — there is a tax on construction to support research. Here,

Ontario Hydro, Stelco, Dofasco and the Ministry of Transportation & Communications are the only outfits big enough to see the benefits of funding research directly."

The new testing system will weigh about 30 tons but air-flow bearings underneath will make it relatively easy to move. It will be housed in the basement of the renovated Sandford Fleming Building.

"We were optimistic," says Birkemoe. "We helped design the space before we were even sure of getting the equipment."

Collins and Birkemoe had little reason to doubt that an installation would have come through eventually, though, particularly since the facility will also be used by researchers from McMaster and McGill Universities, as well as by at least seven of their colleagues at U of T.

Gazing up at the 10-ton overhead crane and the glassed-in computer rooms, Collins stands, a copy of the testing-system plan in his hand, and reflects on his work.

"Basically, we just make things and then break them," he says.

Books

My Mother the Judge



The biography of Trinity College's first female BA who went on to become a suffragist, social reformer and provincial court judge, has just been reissued in paperback, 26 years after its original publication.

My Mother the Judge is the story of Helen Gregory MacGill by her daughter Elsie Gregory MacGill, herself a pioneer at U of T, where she was the first woman to graduate in electrical engineering. That was in 1927, 40 years after her mother caused a furor among faculty members who didn't want her at their lectures and one philosophy professor who, according to the book, went so far as to set up a special seat for her apart from the male group and apologize to the rest of the class for her presence.

Helen Gregory was not the first woman in Canada to receive a BA — Mount Allison University was the scene of that event in 1882. But women were not admitted to all faculties at Trinity until 1886, the year that she pushed for admission to the faculty of arts after receiving a bachelor of music. By 1888 there were 38 female undergraduates enrolled at Trinity and St. Hilda's College was established to accommodate them in separate classes. The following year

Gregory received her BA as the gallery sang "The Merriest Girl That's Out."

The occasion was so momentous that the *Hamilton Spectator* ran an editorial commending her and inviting every citizen in Hamilton, her hometown, to pray for her success in her next endeavour, a master's degree, which she received in 1890. Her final degree was an honorary LLD awarded by the University of British Columbia in 1938 to the first woman judge in the province and probably the country. She died in 1947.

"It was odd that of the students who waited upon the Professor of Mental and Moral Philosophy at Trinity it should be the maverick, the unwanted one, who developed as the subject's most practical exponent," her daughter comments in the book.

Elsie Gregory MacGill was, like her mother, an outstanding woman in her field and a women's rights activist. She died last October. "She knew the new edition was being prepared and was very excited about it," says York University professor Naomi Black, who wrote the introduction, "but she didn't live to see it."

New lounge space found for Sid Smith secretaries

In response to an outcry over the impending loss of a "secretaries' lounge" in Sidney Smith Hall, associate dean Jan Steiner has found alternate accommodation suitable to lounge users.

The original room — where female members of the non-academic staff ate their lunches or went to lie down for a few minutes — has been converted into office space.

The first replacement offered to the women was a small, windowless ante-room adjacent to a washroom. After that proposal was greeted with indignation, Dean Steiner managed to find a seminar room with windows overlooking the construction site of the new cafeteria on the southwest end of the building.

"It will be a bit noisy during the coming

year but after that it should be fine," says Wanda Barrett, graduate secretary in the anthropology department.

Meeting the news media

Guidelines for responding to newspaper, radio and television reporters, prepared by the public relations office for U of T faculty and staff, are now available.

If you wish a copy of the brochure, please contact Nona Macdonald or Mary King at 978-2103 or 978-2105.

Guidé to U of T buildings will be published for disabled

The accessibility to the disabled of all the buildings on the three U of T campuses has been assessed this summer by four university students. Recommendations on improving access will be made to Eileen Barbeau, coordinator of Services for Disabled Persons. In addition, a guide will be published for physically disabled students and faculty which will note the accessibility of entrances, elevators and washrooms, as well as any other information beneficial to the independent access of a handicapped person.

The students assessed the facilities of all buildings, examining a checklist of features which included doorways, ramps, the height of public telephones and their adaptation for the hearing impaired, washroom and cafeteria facilities, handrails, space allocation for wheelchairs in lecture halls, and aisle width and turnstile usage in libraries.

Three of the four students involved in the study attend U of T. Judith Chin is a third year student in physical therapy who has worked as a volunteer with physically and mentally disabled people and as a "candystriper" at the Toronto General Hospital. Jacki Preyde, a sociology major, worked at a nursing home and

a camp for the blind. The third U of T student, Ross Kenton, is studying political science at Scarborough College. He is disabled with cerebral palsy and has worked in the Ministry of Labour's Handicapped Employment Program and done volunteer work with the Ontario Crippled Children's Centre. Ann McMonagle, a sociology major at Queen's University, has written several papers on the integration of physically disabled people into the school and community, and worked on a Ministry of Health survey of disabled people.

To further educate able-bodied students and staff in the various problems and capabilities of their disabled counterparts, the group is planning a series of "awareness days" to be held on all three campuses beginning this fall featuring speakers, films and displays.

For a copy of the guide and information about the awareness days, telephone Barbeau at 978-3011. Her office acts as a liaison with academic and administrative departments, self-help groups and service organizations. Other services include the coordination of volunteers for reading, researching, note-taking and errands for the handicapped.

Ontario universities agree to proposals allowing athletic awards

A new set of proposals by the Canadian Interuniversity Athletic Union (CIAU) that would allow athletic awards of up to \$1,000 to be offered directly by universities to students has been accepted by Ontario universities.

In June, the Ontario Universities Athletic Association (OUAA), the league that represents men's athletics departments, threatened to boycott national competitions involving universities that offered first-party monetary awards to student athletes. They protested that if they didn't offer such awards themselves they could lose prospective students to schools in other provinces.

The Ontario Women's Intercollegiate Athletic Association also opposed the scholarships but was prepared to let its members play in national championships against schools that give them. The council of the Department of Athletics & Recreation at U of T was against the boycott but would have been bound by the OUAA stance to stay out of national men's championships.

The championship events cover 11 sports. Last year the University of Toronto won championships for men's indoor track, men's swimming and diving and women's swimming and diving.

Under the new guidelines issued by the CIAU, a league that wants to give awards to entice and retain student athletes will be allowed to do so. Ontario and Quebec regions oppose entrance scholarships, but the Atlantic Universities Athletic Association claims it can't attract athletes to its schools without them. It's expected that the Great Plains Athletic Conference, which takes in Lakehead University as well as universities in Manitoba and Saskatchewan, will allow the awards, while the Canada West Universities Association will probably reject them.

Under the new plan, only the Atlantic region would have permission to go outside its geographical boundaries to offer financial assistance. Strict penalties have been proposed for abuse of the regulations.

University of Toronto guidelines do not permit first-party entrance awards, but a few year-end awards to outstanding athletes are given. A proposal to recognize the achievements of more students at the end of the year will be considered at an early meeting of the Committee on Campus & Community Affairs this fall.

Applications being accepted for carrels and book lockers

Applications for carrels and book lockers for faculty members and graduate students, Divisions I and II, for the fall/winter session will be received until September 18.

Application forms and information sheets are available at the circulation desk, 4th floor, Robarts Library.

As in the past, assignments for graduate students will be made on the basis of

priorities which have been decided in consultation with the School of Graduate Studies.

Assignment of carrels and book lockers will begin on Oct. 13. For further information, telephone the carrel office (978-2305).

Controversial moral questions examined in unique 'telecourse' starting this fall

A select number of Pickering and Markham residents will soon be able to work on a half-credit in moral philosophy from Scarborough College while watching television in their own livingrooms.

Beginning in September, the college — in cooperation with TVOntario — is offering a "telecourse" that will examine some of the most controversial moral questions facing contemporary society.

Students enrolled in the course will watch a seven-week series of documentaries, each followed by a panel discussion featuring internationally known scholars. Issues to be covered include abortion, capital punishment, poverty and affluence, war, suicide, and euthanasia.

To explore those topics further, the students will meet every Saturday morning at either the Pickering or the Markham Public Library, where seminars will be led by Scarborough College doctoral students Peter Gooch and Nelson Roland. The Saturday morning sessions will begin Sept. 12 and end Dec. 11. In addition to writing a final exam, students will be expected to complete written reports assigned by their instructors.

Moral Issues will also be one of the courses offered this year by the School of Continuing Studies. The instructor will be St. Michael's College philosophy professor Ralph Friedman.

Putting together a television series designed to encourage rational thought about emotional issues was a daunting assignment, says TVOntario's Michael McManus, the series' producer.

"Dealing in abstract concepts is not exactly television's strength."

An overview of the subject is provided in a program titled *The Moral Question*, featuring University of Oxford professor Jonathan Glover. His lecture on identifying and analyzing moral problems could have been filmed in his study, against a backdrop of bookshelves. Instead, it was shot at Canada's Wonderland, a visually stimulating setting filled with faces and motion.

Glover talks about the creation of the amusement park from the standpoint of the moral questions it raised. For example, was it an appropriate use of agricultural land? And whose concerns should most appropriately have taken precedence — the developers' or the local residents'? What constitutes fair hiring practices? And — asks Glover, standing in front of a roller coaster — what about the question of engineering safety versus price? His point is that it's practically impossible to get through any venture without having to make a moral decision.

The other six programs zero in on specific moral issues.

Abortion: A Question of Life dramatizes the case history of a teenager who has her pregnancy terminated in a clinical abortion only to have the 26-week old foetus survive for 10 hours in an incubator.

Following that presentation, U of T philosophy department chairman Tom Robinson will moderate a discussion by Oxford's Jonathan Glover, Alan Donagan (University of Chicago), Philippa Foot (University of California), and Lorene Clark (Dalhousie University).

In a look at the morality of war, *Killing and Dying* considers the viewpoints of a military historian, a paraplegic veteran of the Vietnam war, and a former chairman of the US chiefs of staff.

Black Man's Burden shows how developing nations continue to suffer the economic ills of colonialism long after independence has given them political freedom. Economists, government officials from Third World countries, and Tanzanian president Julius Nyerere comment on the economic plight of developing nations and their urgent need of aid, technology and diversification. Subsequent discussion by scholars centres around whether or not affluent countries have an obligation to assist the Third World.

In this country, on Dec. 10, 1962, Ronald Turpin, who had shot a policeman, and Arthur Lucas, who had killed two drug dealers, went to the gallows. *The Last Hanging in Canada* illustrates their last hours and the final death walk. Narrating this dramatization is the Salvation Army officer who was with the two men on their last day of life. Later, two men on death row in Florida argue against capital punishment and a former warden of Pennsylvania State Penitentiary defends the death penalty.

The morality of euthanasia is explored in two films. *Better Off Dead* focuses on two people — a Downs syndrome child whose parents, by refusing surgery, allow her to die and a woman who has been kept alive for 18 years on a respirator. *Right to Die* is about a 16-year-old girl who refuses the dialysis that would prevent her from dying of a kidney malfunction and a 26-year-old woman who has been relying on dialysis to keep her alive since she was 13.

The *Social Issues* series will be telecast by TVOntario (Channel 19, Cable 2) on Tuesday evenings at 10 p.m. beginning Sept. 15 and repeated the subsequent Saturday afternoons beginning Sept. 19 at 3 p.m.

Feeling fit at IES



MARK SHAUB

A group of women at the Institute for Environmental Studies (IES) turned a seminar room into a gymnasium this summer so that they could cram exercise classes into their busy schedules.

Feeling flabby but unable to find the extra time to walk over to Hart House or the athletic complex, the women asked Lisha van Leeuwen, supervisor of fitness instruction programs for the Department of Athletics & Recreation, to suggest an instructor who would come to them. They arranged to pay her themselves.

"We are not prepared to embark on satellite programs right now," said van Leeuwen, "but we felt it was worth encouraging them to be active as long as they could make the facilities workable and were willing to organize a group and hire an instructor."

A group of 11 women, mostly secretaries, met three times a week after work in June and July for 30-minute sessions with instructor Cathy McNorgan. "The first couple of weeks, 30 minutes was plenty," said participant Mary Bird. "But we plan to start again in September and maybe have two weekly classes of 45 minutes instead. People feel a capacity to go on a little longer now."

Cost to each member of the fitness class was \$24 for nine weeks. Enrolment was limited because of the size of the room allocated for the classes, a second floor seminar room that seats about 50 students. The small size of the class was a decided advantage, said Bird. "We had carpeting instead of mats and sinks instead of showers, but we were all very enthusiastic about the program."

It's a snap

A team of eight high school students coached by Professor E.J. Barbeau of the University's mathematics department and Professor G.J. Butler of the University of Alberta placed seventh out of 27 in the International Mathematics Olympiad held last month in Washington, DC. The winning team was from the US.

Canada's team included two UTS students, John Chew, whose father is Professor J.J. Chew of anthropology, and Cary Timar. John will be entering the mathematics specialist program at U of T this fall.

This is the first year a Canadian team has entered the competition. Funding was obtained from the Canadian Mathematical Society, the Samuel Beatty Fund, which was established by graduates of the mathematics and physics programs at U of T, and the Ontario Ministry of Education. Prof. Barbeau said it's likely a Canadian team will be sent to next year's

competition which will probably take place in Hungary.

The students were given nine hours on two consecutive days to work out six multi-stage problems. "The individual steps are all high school work," said Barbeau. "It's the combination of the steps that demands sophistication."

Some of the students thought the paper was too easy, he added. Below is a sample question, which all the Canadians got right. Barbeau says it's a snap, but he did provide a solution for *Bulletin* readers whose math skills are rusty.

The question:

The function $f(x,y)$ satisfies

(1) $f(0,y) = y + 1$,

(2) $f(x+1, 0) = f(x, 1)$,

(3) $f(x+1, y+1) = f(x, f(x+1, y))$,

for all non-negative integers x,y .

Determine $f(4, 1981)$.

Turn to page 12 for the solution.

Careless named to Order of Canada

History professor Maurice Careless is one of 63 people recently appointed to the Order of Canada by Governor General Edward Schreyer. Careless was one of 22 individuals including Bank of Canada governor Gerald Bouey named officers of the order.

Prof. Careless, 62, has taught at U of T since 1945. He received the Governor General's Award for Academic Non-Fiction twice — in 1954 for his book *Canada: A Story of Challenge*, and in 1964 for his biography of George Brown, *Brown of the Globe*. He has received numerous academic and professional honours and served on many professional and public bodies. In January he was appointed chairman of the Historic Sites & Monuments Board of Canada.



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Job Openings

Below is a partial list of job openings at the University. Interested applicants should read the Promotional Opportunity postings on their staff bulletin boards, or telephone the Personnel Office for further information. The number in brackets following the name of the department in the list indicates the personnel officer responsible. Please call: (1) Sylvia Holland, 978-6470; (2) Margaret Graham, 978-5468; (3) Jack Johnson, 978-4518; (4) Ann Sarsfield, 978-2112; (5) Barbara Marshall, 978-4834; (6) Bob Potvin, 978-4419; (7) Beverley Chennell, 978-8749.

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Education (4)

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Fine Art (1), Landscape Architecture (5),
Linguistics (1)

Clerk Typist III

(\$12,170 — 14,320 — 16,470)
Civil Engineering (5), Vice-President &
Provost's Office (1), Education (4),
Chemistry (1), Geology (1), Hart
House (3)

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(\$12,170 — 14,320 — 16,470)
Continuing Studies (2), Comptroller's
Office (2)

Secretary I

(\$12,170 — 14,320 — 16,470)
Research Administration (1), President's
Office (1), Athletics & Recreation (3),
Law (6), Ophthalmology (4), East Asian
Studies (1), Woodsworth (5), History &
Philosophy of Science & Technology (6)

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Office, Medicine (4), University
College (5)

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Library Automation Systems (3), Land-
scape Architecture (5)

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Governing Council (1)

Laboratory Technician II

(\$14,900 — 17,530 — 20,160)
Biochemistry (5), Medicine (4), Chemical
Engineering (5), Playfair Neuroscience
(4), Anatomy (4), Dentistry (1), Banting
& Best (5), Physiology (5), Medical
Genetics (5), Microbiology & Para-
sitology (5)

Laboratory Technician I

(\$12,170 — 14,320 — 16,470)
Obstetrics & Gynaecology (4)

Anatomy Technician

(\$16,460 — 19,370 — 22,280)
Anatomy (5)

Laboratory Technician III

(\$16,460 — 19,370 — 22,280)
Department of Medicine (4), Biochem-
istry (5), Scarborough (4), Pathology (4),
Dentistry (1), Chemical Engineering (5)

Electron Microscopist III

(\$16,460 — 19,370 — 22,280)
Erindale (4)

Engineering Technologist I

(\$14,140 — 16,640 — 19,140)
Aerospace Studies (5)

Engineering Technologist II

(\$17,400 — 20,470 — 23,540)
Central Services (4), Erindale (4),
Mechanical Engineering (5)

Engineering Technologist III

(\$19,300 — 22,710 — 26,120)
Electrical Engineering (5), Aerospace
Studies (5)

Craftsman I

(\$12,170 — 14,320 — 16,470)
Faculty of Medicine (4)

Registered Nurse I

(\$16,460 — 19,370 — 22,280)
Nursing (5)

Programmer C

(\$16,575 — 19,061, Union)
Library Automation Systems (3)

Programmer D

(\$18,374 — 21,162, Union)
Library Automation Systems, two
positions (3)

Programmer II

(\$18,270 — 21,490 — 24,710)
Student Record Services, two positions (3),
Health Care Research Unit (5)

Programmer Analyst

(\$20,383 — 23,501, Union)
Library Automation Systems (3)

Programmer III

(\$22,520 — 26,490 — 30,460)
Zoology (1), Computing Services, two
positions (3), Student Record Services,
two positions (3)

Programmer IV

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Computing Services (3), Student Record
Services (3)

Engineering Officer II

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Computing Services (3), Computer Sys-
tems Research Group (1)

Engineering Officer III

(\$29,330 — 34,500 — 39,670)
Computing Services (3)

Central Control Monitoring

Systems Engineer
(\$24,980 — 29,390 — 33,800)
Physical Plant (6)

Police Constable

(Probationary, \$15,704)
Physical Plant, three positions (3)

Director of Academic Records

(\$29,810 — 37,260 — 44,710)
Faculty Office, Arts & Science (1)

Payroll Clerk

(\$13,390 — 15,750 — 18,110)
Comptroller's Office (2)

Associate Secretary

(\$23,740 — 27,930 — 32,120)
Graduate Studies (2)

Production Stage Manager

(\$14,900 — 17,530 — 20,160)
Graduate Centre for Drama (6)

Draftsman

(\$14,900 — 17,530 — 20,160)
Physical Plant (6)

Library Technician IV

(\$12,170 — 14,320 — 16,470)
Law (6)

Box Office Operator

(\$12,170 — 14,320 — 16,470)
Music (1)

Marketing Representative III

(\$23,740 — 27,930 — 32,120)
Library Automation Systems (3)

Customer Service Clerk

(Library Technician 5, Union)
(\$13,554 — 15,536)
Library Automation Systems (3)

Admissions Officer (Administrative

Assistant II)
(\$19,300 — 22,710 — 26,120)
Housing (3)

Executive Secretary to the Joint

Council on Education
(Senior administrative salary level)
(7)

Games children play

provide clues as to what determines a child's social patterns

by Sarah Murdoch

Two Scarborough College professors have been "playing house" with mothers and their preschool children to document the ways in which different ethnic groups affect their offspring's social behaviour.

"We want to find out how the mothers' ethnic identity, attitudes and interactions with their children influence a child's communications skills," says sociology professor Wsevolod Isajiw.

Over the past 18 months, Isajiw and Professor Suzanne Whalen, a linguist, have studied about a dozen each of second-generation Ukrainian and Greek mothers and their children, as well as a few mothers and children of German extraction. "Second-generation mothers experience the greatest cultural conflict, because they grow up in both worlds, and this conflict may reflect itself in their interactions with their children," says Isajiw.

Until now, most research on ethnicity has focused on verbal skills as related to intelligence and ability to learn. Gradually, sociologists and educational theorists are training their sights on both verbal and non-verbal communication, in the growing recognition that the two are inexorably connected.

Over the course of their study, the two researchers have observed mothers and children playing together with a doll-house — complete with mother and child dolls within. Generally speaking, they have documented three types of play relationships: engaged behaviour, in which both mother and child are enthusiastic about playing with the doll-house; imposed, in which the mother and child simply obey commands; and resistant, in which neither the mother nor the child wants to play by the rules set out for them.

What has surprised the researchers is that often when a mother is highly engaged in the doll-house activity, her child's behaviour appears to be imposed. If the mother's behaviour is highly imposed, then the child may show either high resistance or highly imposed behaviour.

"We weren't expecting that reaction," says Isajiw. "We thought that if the mother was bubbly and enthusiastic, the child would be bubbly as well." Although findings are in their early stages, he says it appears that to elicit an engaged reaction from a child, a combination of engaged and imposed behaviour is necessary from the mother. "She is bubbly, but plays by the rules. It may be that children need that structure."

The researchers have also set up situations in which an "auntie" doll, in beautiful ethnic dress, comes to "visit" the doll-house. "There's a tendency for



Mother and child are asked to pick the dolls they identify with when playing house.

the child to withdraw from the auntie-figure, but we don't know yet whether the child shies away from all strangers, or whether it is the ethnic clothing that causes the withdrawal," says Isajiw.

In order to discover whether a child's interaction with other youngsters is affected if he feels "different" from them, the researchers arranged for the children who played together to take turns in wearing a scarf or hat that would indicate he or she is from a different ethnic background. "There is a tendency for the child to feel very uneasy if he is wearing the ethnic marker," says Isajiw. "Usually before the game is over, the child has thrown away the scarf or hat."

Isajiw and Whalen also noted that the

child seems more at ease and friendly if there are three, rather than only two, children playing together.

The researchers say they will continue their doll-house experiments using a variety of ethnic groups. What emerges may help teachers, child-care workers and the mothers themselves better understand that unusual social patterns may have more to do with a child's background than with psychological factors. Says Whalen: "Interaction skills have to do with how comfortable we feel. Often a child and a mother have established certain patterns with which they are both comfortable. The mother does something and the child responds in a certain way. But when the

child goes to school, the expected pattern may be different. This is not a linguistic or a behaviour problem — just an interaction pattern."

And from Isajiw: "We are finding out that certain interactions produce certain types of behaviour in children. If we could isolate those types of interaction, we could point them out to mothers and explain that they are just as important as other aspects of bringing up children. We can apply this knowledge to make mothers more aware of the types of behaviour that occur in children as a result of certain types of mothers' interaction with them."



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Computers in the humanities

The Centre for Religious Studies is offering a course beginning this fall entitled *The Use of the Computer in the Study of Texts*. Intended as a general introduction to computing in the humanities, the course "is the only one of its kind and is badly needed", according to its instructor Professor J.C. Hurd.

Course members will be introduced to the literature in this area and to the work in progress on the campus. They will learn to write programs of their own. The text is Susan Hockey, *A Guide to Computer Applications in the Humanities* (Johns Hopkins, 1980). The program-

ming language is SNOBOL4. It is not expected that members of the course will have previous training in the use of computers. Topics to be covered include the representation of texts in machine-readable form, non-Roman alphabets, diacritical marks, text editing, input systems, output devices, preparation of indexes, concordances and dictionaries, morphological and syntactic analysis, and style and authorship. In the second semester members of the course will be encouraged to develop their own particular research interests. Auditors are welcome.

Seminar for Newsletter Editors

“Production in a Nutshell”

Instructor:
Ron Osmond
Graphic Design and Illustration Programs
Sheridan College

Thursday, September 24
9 a.m. to 2 p.m.
Music Room, Hart House

All University editors are invited.
Registration information will be in Sept. 8 Bulletin.

Valuable finds in donation of books to East Asian library

Copies of some of the most valuable editions of certain modern Japanese literary works have been discovered among some 500 books donated to the Japanese collection of the University's East Asian library. The donation was made by Yoriki Iwasaki, publisher of the *Continental Times*, a Japanese-language newspaper in Toronto, and his wife Midori.

Professor Shuzo Uyenaka of the Department of East Asian Studies is evaluating the donation and has already identified the following copies of first printings of original editions: *Kokoro* (Heart), Natsume Sōseki, 1914; *Meiro* (The Maze), Arishima Takeo, 1918; *Den'en no Yūutsu* (A Pastoral Melancholy), Satō Haruo, 1920; and *Tōbōki* (The Escape), Ibuse Masuji, 1934. Copies of the second or later printings of the original editions, many published in the same year as the first, were also discovered, along with works of other important authors.

The donation adds another dimension to one of the major research collections in its field in North America. The collection includes some 70,000 bound volumes, to which are added about 4,000 volumes annually, while it subscribes to over 150 current periodicals. The collection's real strength is in modern Japanese literature. The library has at least one edition of the *zenshu* (set of collected works) of almost every major or minor Japanese writer for which one has been published in modern times (the Meiji, Taisho and Showa periods). For the major authors the library searched through second-hand book dealers' catalogues and purchased not only various editions of their *zenshu* but also many scholarly biographical and critical works on them.

With the addition of the "giants in Japanese literature" from the Iwasaki donation, Professor Uyenaka says the research library is now even more attractive to scholars.

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ISC needs volunteers for English program

The International Student Centre requires the assistance of facilitators for its English program for foreign students, beginning October 1981.

Small classes (maximum 10) will meet for one two-hour session each week. The focus will be on spoken English, especially the use of idiom and grammar. Content will be determined by the needs of the students. Sensitivity to, and interest in, other cultures is essential but experience in teaching, while desirable, is not necessary.

Orientation workshops for volunteers will be held during September.

For additional information, please telephone the ESL coordinator, Ann Fuller, at 978-2038.

Newspapers in Microform

The U of T Library, Reference Department, is pleased to announce the third edition of *Newspapers in Microform*, compiled by Iqbal Wagle.

This publication, which is based on the library's collection, lists approximately 680 newspaper titles, of which 366 are from Canada. The titles range in date from 1650 (*Mercurius Politicus* from the United Kingdom) to recent issues of the *Globe and Mail*.

Copies are free to members of the University and may be obtained from the Microtext Section, John P. Robarts Research Library, 3rd floor (978-5355), or by writing or telephoning the Reference Department, John P. Robarts Research Library, 130 St. George St., (978-2279).

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Events

Lectures

Tuesday, September 8

Cardiac Anesthesia — Past, Present, and Future.

Prof. Joel A. Kaplan, Emory University Clinic, Atlanta; Harry Shields Memorial Lecture. 3153 Medical Sciences Building. 5 p.m.
(Anaesthesia)

Thursday, September 10

The New Ethnicity and Human Rights.

Michael Novak, American Enterprise Institute, Washington, DC; part of program, Ukrainian Experience in Canada: 1891-1981. Auditorium, Medical Sciences Building. 8 p.m.
(Community Relations, Chair of Ukrainian Studies, Chair of Ukrainian Studies Foundation and Ukrainian Librarians Association of Canada)

Colloquium

Tuesday, August 25

Studies with Co-Enzyme Models.

Prof. U.K. Pandit, University of Amsterdam. 428 Lash Miller Chemical Laboratories. 3.30 p.m.

Films

Tuesday, August 25

Ukrainian-Canadian Films.

An evening of films followed by discussion; part of program, Ukrainian Experience in Canada: 1891-1981. Room 205, Faculty of Library Science, 140 St. George St. 8 p.m. Information, 978-6564.

(Community Relations, Chair of Ukrainian Studies, Chair of Ukrainian Studies Foundation and Ukrainian Librarians Association of Canada)

Exhibition

Tuesday, September 8

Hart House Permanent Collection.

Recent acquisitions. Hart House Art Gallery to Sept. 25.
Gallery hours: Monday, 11 a.m. to 9 p.m.; Tuesday-Saturday, 11 a.m. to 5 p.m.; Sunday, 2 to 5 p.m.



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Concerts

Monday, August 24

Student Recitals at CNE.

Music Building, at 6 p.m. each day of Canadian National Exhibition except for Sunday, Aug. 30. Information, Royal Conservatory of Music, 978-3771.

Monday, August 24

Catherine Bolger, soprano.

Tuesday, August 25

Brian Morton, violin.

Wednesday, August 26

Jayne Maddison, violin.

Thursday, August 27

Halyna Dytyniak, soprano.

Friday, August 28

Heather Hay, cello.

Saturday, August 29

Eric Zivian, piano.

Monday, August 31

Helena Wei, piano.

Tuesday, September 1

Martin Beaver, violin.

Wednesday, September 2

Wendy Morton, cello.

Thursday, September 3

Lori Freedman, clarinet.

Friday, September 4

Raymond Bisha, French horn.

Saturday, September 5

Teresa Garraway, mezzo-soprano.

Sunday, September 6

Mary Staples, cello.

Monday, September 7

Andrei Damyanovich, violin.

Miscellany

Monday, August 24

Campus Tours.

Walking tours of the St. George campus will be given week-days to Aug. 28 at 10.30 a.m., 12.30 and 2.30 p.m. from the Map Room, Hart House. Special tours are available for groups, please make arrangements in advance.

Please note: the regular summer walking tours end Friday, Aug. 28.

Information, Campus Tours, Hart House, 978-5000.

Thursday, August 27

Theatre Symposium.

In conjunction with Scarborough College's second Stratford summer seminar; participants will include Brian Bedford, actor and director. Limited number of places available to public. Rehearsal Hall, Festival Theatre. 10 a.m. Registration fee \$25 includes luncheon. Information, Jan Wood, Scarborough College, 284-3379.

Gallery Club

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